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PRESS ADVISORY

Secretary of Defense William Perry will speak to the American Institute of Aeronautics and Astronautics /Aerospace Industries Association "Global Air and Space 1994 International Business Forum and Exhibition" tomorrow, May 5, 1994, at noon (EDT) at the Hyatt Regency Crystal City Hotel, 2799 Jefferson Davis Highway, Arlington, Va. The event is open to the news media.

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Editor's Note: Due to the Secretary's speech, the regularly scheduled Department of Defense News Briefing for May 5 is canceled.

SECRETARY OF DEFENSE WILLIAM J. PERRY
REMARKS TO THE GLOBAL AIR AND SPACE INTERNATIONAL FORUM
ARLINGTON, VA
MAY 5, 1994

SEC. PERRY: (In progress) -- but to take the opportunity to present an award to Ben Rich (sp). Indeed, it is a privilege and an honor for me to present the Distinguished Public Service Award to Ben Rich.

I might also note before I do that that with Ben today are his son Michael, his wife Hilda, and his friends Mr. and Mrs. Herman Robbins (sp), and we welcome them today.

This recognition is long overdue, and as the secretary of defense, one of the privileges I have is being able to use my position as a bully pulpit to make statements on issues which are important to me. And those of you who know me know that it has always been critically important to me to advance the cause of technology being applied to national security systems. And I thought there was no better way to make a statement about that than to recognize the contributions of one of the real pioneers in this field.

Now, I might also note that at the time I was appointed secretary, there were some media articles proclaiming that I was the father of stealth. Now, I have to say I did play a very important role in energizing the government to move vigorously forward in this field, but I believed then and I believe now that Ben Rich provided the intellectual and the spiritual leadership, and that the title "father of stealth" really belongs to Ben. So, one of the things I wanted to do today was to set the record straight and to give full credit where credit is due.

Now, Ben learned a long time ago something I've come to learn very recently, that Washington is a town where you can get anything done as long as you're willing to give someone else the credit, and -- (laughter) -- he has done that very successfully through the years, but it is time that we bring the credit back and put it where it is due.

The second reason I wanted to do this today is I wanted to get off the hook, and I want to explain to you what I mean by that. Last month Tony McPeak told me in rather, I should say, hostile tones, he said, "If you are the father of stealth, then I expect you to start making child support payments." (Laughter.) So truly it's time for me to get off that hook because it's going to start costing me a lot if I have to maintain that title.

With those introductory remarks, I'd like to ask General Kern, my senior military assistant, to read the citation that goes with this award.

GEN. PAUL KERN (Senior Military Assistant): :To Ben Rich (sp) for exceptionally distinguished service to the United States and to the Department of Defense as vice president and later as president of Lockheed Advanced Development Companies from January 1975 to May 1994. Mr. Rich, a pioneering aeronautical engineer, has made unprecedented and unparalleled contributions to the national security through the development of specialty aircraft of extraordinary sophistication and performance capability. Drawing on his earlier experience in the development of the SR-71 and U-2,

Mr. Rich led the world-famous Lockheed Skunk Works, which spearheaded the development of revolutionary stealth technology, first with the Hablu (ph) technology demonstrator and later with the F-117A and the F-22 advanced tactical fighter. By establishing project management that was small, close-knit, streamlined and dedicated to very specific and highly sophisticated program objectives, the Skunk Works under Mr. Rich's leadership produced a family of aircraft that dramatically extended the envelope of American air superiority. His efforts have given us the ability to strike with absolute impunity deep into the most densely-defended target areas, which is a major milestone in the history of military aviation. Tasked to develop the nearly impossible, he did so. His efforts resulted in aircraft tested in the most demanding of all possible combat environments during the Gulf War, and the results stunned the entire world.

Perhaps the greatest testimony to his genius is not just the success of his aircraft in combat but that pilots came back. They all came back. Mr. Rich's unstinting dedication, devotion to the national

defense and extraordinary technological accomplishments reflect the highest credit upon himself and the Department of Defense.

SEC. PERRY: Ben, would you come up here, please? It is with considerable pleasure that I have the honor of pinning this medal on you. Congratulations. (Applause.)

MR. BEN RICH (sp): Thank you, Bill. I accept this thing, but really I'm kind of humbled because, you know, the boss always gets the credit, and really the success of doing this is the men and women of the Skunk Works. I could have never done it alone.

And all through the years the success has been its people around us and around -- not only that, but the people we worked with, because I remember when I called Bill up -- we had had this tremendous breakthrough -- he immediately recognized it, grabbed it, and took the risk of putting money in it. And he supported the thing. We went totally black. And, by god, we didn't let him down.

But I just want to thank all of you, because if we couldn't have had the support of the DOD key people and the people at the Skunk Works, it could have never been done, and we did it three times with the U-2, the SR-71, and then with the F-117.

So I just look forward to the future, and Bill, I just want to wish you the best of everything. Thank you for the award. (Applause.)

SEC. PERRY: Ben and the thousands of other scientists and engineers who have worked on defense programs these past few decades have given our country a truly significant technological advantage over any other military in the world. We saw that most strikingly in our victory over Saddam Hussein's force in Desert Storm, and our technology was clearly one very important reason that we prevailed so quickly and with minimum casualties. Today I would like to focus on how we're going to carry our technology and the advantage of this technology into the future.

Of course, we have to start off by conceding that the weapons that we used against Iraq were designed for a much tougher adversary -- the massive forces of the Soviet Union as they existed in the late '70s and the '80s. And because of our concern over those forces, in the '70s we conceived of something called the offset strategy. And the whole idea behind the offset strategy was that we would offset the greater number of Soviet weapons with the superior technology in our weapons. Fewer but better U.S. weapons would give our soldiers what business calls an unfair competitive advantage over the then Soviet forces, and we believed that this competitive advantage would allow us to fight and win against forces even if we were outnumbered perhaps two to one.

Fortunately, we never had to test that strategy against the Warsaw Pact, but we did see its impact in the dramatic victory in Iraq. Today the question that is facing us is how do we maintain that unfair competitive advantage of a dramatic decline in the defense budget and in the face of a totally different set of problems?

Now, I'd like to pause just for a moment and say that, when I came back to Washington this time a little over a year ago, there were many voices here that were still saying that we didn't really need to worry too much about our defense or about maintaining a capable defense, that with the ending of the Cold War, the need for a capable military has gone away. Those voices are fewer today than they were 15 months ago, but it is still worth making the point that this country needs a capable military force. I want to give you, first of all, two theological reasons for that, and then give a few technical or practical reasons.

A great German theologian, Reinhold Niebuhr, once said, "Man's capacity for good makes democracy possible; his capacity for evil makes it indispensable." And I might also say it not only makes democracy indispensable; it makes a country that is a democracy -- it makes it indispensable that it maintain capable military forces so that it can preserve that democracy.

And the other statement was made by Daniel Patrick Moynihan a few years ago when he said, "Ethnicity is the great hidden force of our age." What he said was true when he said it. Today I would modify it and say it is a great force of our age, but it is no longer hidden. You only have to look at the developments in Rwanda and in Bosnia and in Somalia to realize that ethnicity is driving much of the problems, much of the trouble, much of the need for military forces in the world today.

I came back last week from a visit to Korea to see our forces over there and to do some planning with the South Korean government relative to the military threat which we see and the South Koreans see from the North Korean government. And there's no doubt in my mind, first of all, of the need for a strong military to deter the North Korean forces, and secondly, for the supreme importance of technology in that deterrence. As I looked at our counter-battery operations with the 2nd Infantry Division, with the counter-air operations that we have with the F-15 Eagle among others, and I saw the crucial role of technology in giving our forces

the edge that they would need first of all to deter any North Korean adventure, but secondly, if we're not successful in deterring, to be able to win quickly and decisively.

I also have seen every week in the last number of weeks the importance of technology in the flight lines at Aviano and on the carriers in the Adriatic where we are supporting peacekeeping operations in Bosnia. And I have seen the need for technology as we execute the Deny Flight operations in Iraq. Indeed, the tragedy we had there a few weeks ago illustrated once more the importance of having capable and reliable IFF equipment and the tragedies that occur when we don't.

So the first part of my theme then is that we not only continue to need capable military forces, but a key part of this capability is going to be maintaining our technological edge. And then the second part of my theme is what we do in the next decade or so to maintain that edge compared with what we have done in the previous decade or two.

And I believe that a major part of our technological thrust in this next decade is going to lie in applications of the dramatic developments in information technology, because the power of the microprocessor is not only driving civilian industries in our country; it has the potential to drive developments in the Defense Department as well. I say potential not because we're not using information technology, but because we are not using to anywhere near its full capabilities. I believe that the scientists and the engineers, who were the heroes of the Cold War, will again have the opportunity to be heroes in this new era.

We live in an age which is driven by information. It's an age which Alvin Toeffler has called the Third Wave. The ability to acquire and communicate huge volumes of information in real time, the computing power to analyze this information quickly, and the control systems to pass this analysis to multiple users simultaneously -- these are the technological breakthroughs that are changing the face of war and how we prepare for war.

Technology has many applications to our Defense Department today, some of which we are following, most of which we are not following very rigorously. The first of these, and the most obvious, is to battlefield situation awareness, the ability to know not only where the friendly forces are, but where the enemy forces are at any time on the battlefield.

We saw some of this demonstrated in Desert Storm. I think the most dramatic example -- I'm sure you've all seen the pictures, the displays from the (Joint Stars ?), which displayed the entire theater of operations, all of the vehicles in the entire of operations in a single display in real time. We also had multiple applications of the GPS, the Global Position System, which allowed us to know where our own forces were. But we lacked, we substantially lacked, the glue for tying this all together and for getting the commands out to the people in the field who needed the information. So we have to do better in using our information technology, to use these modern new sensors to their full advantage.

We're already doing some of this in our humanitarian airdrops in Bosnia. The C-130 pilots on these missions used stored maps and terrain data combined with information from GPS and real-time intelligence, and they have achieved an accuracy in airdrops which would have been unheard of just a few years ago. And the size of that operation is something which most citizens don't fully comprehend, but in Bosnia in the last year we have conducted more airlifts and more airdrops than the entire Berlin airlift put together. This is a massive operation that's going on. It's going on every day, and it's going on with great efficiency and great effectiveness.

We can never fully eliminate the fog of war, but we can cut through it enough to make a decisive difference in the battlefield.

The second area where information technology is having a great impact is in computer simulation. We've been using simulation for years, even for decades, but again we've just been scratching the surface of what truly can be done. The simulation in training is something which we've been doing in flight training certainly for several decades, but it's now available to make more realistic -- to be much more realistic and make many more demands on the pilot's skills, because the computer simulations can combine satellite imagery with known landmarks to give pilots a realistic preview of what they may see from the cockpit on a particular mission.

When I was on my way to Korea, I stopped in Elmendorf Air Force Base to talk with the pilots who operate the F-15E squadron there and went over with them in some detail how they will conduct their missions there. They are using some of the most advanced sensors in the world. They have some of the most advanced missiles in the world. But their information display system was a notebook which they strap on their knee. And they do a pretty damn good job with that notebook strapped on their knee, but they could do a lot

better job if we really brought some information technology to bear on that problem.

Taking units to the field, aircraft to the air, or ships to the sea is also no longer the only way we can do effective training. Simulation is another. And the combination of field tests and simulation is probably the most effective way to train, and we're just now beginning to introduce simulation.

Here I might mention we not only have the technology problem of how to introduce it, but there's a political problem, because there's been a certain political correctness in this town as to what true exercises and training consists of. And we need to, somehow, solve the political, as well as the technical problem so that we can get the full potential of the use of simulation for testing systems and for training people in the proper use of systems. And I think the -- all of the services are pursuing this now.

In particular, the -- I commend to the attention of all of you the work that the Army is doing in their battle laboratories in very advanced use of simulation not only for training and exercises, but also working its way back to the design of systems, where in the design of the systems from the very first stage, the designer has the opportunity to take into account how this system would operate in various simulated battlefield conditions. It give us one opportunity to bring together really for the first time the tactical and the technical aspects of a system in the very early stages of its design.

Another area where we can harness information technology is in our logistics operations. This is -- information technology is already well on its way to transforming logistics in the civilian world, but the need for it in the military is at least as great; in most of our applications it's greater. On the other hand, we have lagged behind. Desert Storm in particular showed the complexity of logistical support for far-flung operations. And while many individuals in many units undertook heroic efforts to make that all work, they were working in spite of the logistics systems we had and not because of it.

Determining logistics requirements and tracking equipment as it's moved around the world is clearly an information-intensive task, and we need to take the new information technology tools and apply it to that task to improve the efficiency of this operation. We have -- we're testing now and applying a new system -- subsystem for this purpose. It's called radio frequency identification tag, or RFID. And we actually used that system to ship cargo to Somalia. We've put interrogators in Pennsylvania where we packed the pallets, at stopover points, and at Mogadishu. That way we could tell where everything was while it was still in transit. Also, once the pallets arrive at the area, we now have warehouses with dozens or even hundreds of pallets stored in them. By simply calling them up like you do with your -- some of the new keys for cars, you can get a location of the pallet, as well as a listing of what's in it.

These are simple and trivial things to conceive, but the technology is available to allow us to be applying them and applying them now. And we should be doing that.

The fourth area where information technology can make revolutionary improvements is in the development and the production of weapons we buy. I already mentioned something about the development, which is tying the simulation in -- simulation of battlefield conditions -- so that, when we develop the system, we develop them to realistic battlefield conditions. But in the production we're now moving from the current system, where reams of paperwork are passed back and forth between the design and the manufacturing staff to a system with common, integrated data basis.

In short, we are truly on the threshold of paperless design and manufacturing. This is something that we have talked about for more than a decade, but now it is being applied. And you in the aerospace industry are really leading the charge in the -- in this field.

I have spent some time studying what Boeing is doing, for example, on the 777 passenger aircraft. At its peak, Boeing was using over 2,000 workstations and 8 mainframe computers to design the aircraft. They had integrated teams of designers, part suppliers, and manufacturing supervisors working together from the beginning, all of them with ready access to the current design through computers. They're designing all of the parts on the computers and can look them up in three dimensions. They can also assemble the parts electronically on computers to make sure that they fit properly. This has had an amazing improvement in eliminating the need for costly mock-ups, and it greatly reduces the costly work-ups in that program. This approach truly is the third wave in the -- and is the new wave for the future of manufacturing.

The bottom line, then, on information technology is that it will dramatically alter the way we train, equip and employ our armed forces. But there is one very important difference between the '90s and the '70s when it comes to applying technology to defense problems, and that is that most of the technical advances that we are concerned about in

defense today are being driven by the commercial marketplace and not the defense marketplace. And therefore, we have a critical requirement to somehow change our systems so that we can get full access to commercial -- we in the department have the requirement, those of you who are contractors will have that same problem of learning how to get access to commercial technology and commercial products so that we can take full advantage of this technology in the Defense Department.

Today the Defense Department's purchases account for less than 5 percent of the domestic market for semiconductors and computers. We no longer drive these markets. We need to stand on the shoulders of these technologies and these markets to take full advantage of it.

This RFID (?) tag that I mentioned to you is a perfect example of this. This was developed 100 percent commercially, and the Defense Department is just picking it up and using it. We have -- somehow, in order to do this, we have to change totally the way we do our procurement. I have talked with this group before about the necessity for the Defense Department to change its procedures and the concomitant necessity for industry to change its procedures. We have to remove the barriers that we have created over the last four decades that keep these -- our defense industry separated from our commercial industry. That is to say, we must -- and I hate to use this phrase -- we must reform our acquisition system.

I know that there have been countless panels and countless studies calling for that acquisition reform and it has never happened, and this time it is going to happen. This I tell you with great confidence. It will not happen without blood, toil, sweat and tears, but it will happen. It will happen because it is both necessary and possible. It's necessary because it is the key to the Defense Department to saving us money, getting us quality equipment, and integrating the defense and the commercial base. And it is possible because, perhaps for the first time, we have the executive branch fully together on the necessity of doing it and we have important leaders in the Congress fully behind doing it.

There will be two components to the changes that we are making, which I'm calling acquisition of the reform system. The first of those is actions which we have asked the Congress to take. I'm sure you are all aware that there are several bills in the Congress being considered today. I will give you a forecast that one of those bills is going to pass within the next, I would say, two months, and we will have a new, comprehensive reform acquisition bill which will provide the new constraints on what we can do in the way of acquiring systems from the industry. This bill, I will also tell you, will not be as comprehensive and as deep as I had hoped. There are many changes which I was pushing for which are not in any of the features of the bill that are being considered. Nevertheless, it will be an important step forward and I will welcome it when it finally gets passed. That will account for about half of the changes which we can make in the system. The other half of the barriers are self-inflicted wounds; they are regulations and processes which we created in the Department Defense and which we have the full authority to un-create and set up new processes. And we have set up in the last six months process action teams which are systematically changing the whole set of regulations and processes by which we buy our equipment. And in particular, the leading edge of this, and the one which will be most visible to industry the soonest, is removing the -- and dramatically transforming the whole process of military specifications and transforming that system so that most of the equipment and most of the systems and most of the subsystems that we buy in the Defense Department will be bought to commercial specs, industrial specs, not to military specs.

Reform is one aspect of it, just the things we buy is another important aspect, and we will have a greatly increased emphasis on dual-use technology in the products that we buy and in the research and development that we sponsor in the Defense Department. You're all familiar with the Technology Reinvestment Program. I'm not going to talk about that today.

I did want, however, to talk a little bit about a new program which was just announced a few days ago, and that was a program to help American manufacturers produce flat-panel display screens, the screens used in equipment such as portable computers or in the avianics that we have in a pilot's displays. These screens are becoming increasingly critical to the military to display information which we need to give us an advantage in combat. We have started a program which over the next five years we will plan to spend about $600 million.

So as R&D programs go, this is a healthy program. And the purpose is to encourage not just research in this area but production in this area. It is like the TRP program in that it has a requirement for matching funds from industry. It is different

from the TRP program in that its emphasis is on production. We have required all of the bidders for this program to warrant that they will set up a production line to make production quantities of the displays which they develop. We want to take these products out of the sandbox and into the market.

We also have one other step that we need to take to really make this change happen, and that is we have to remove the most cumbersome and expensive licensing requirements for the products which this industry sells. The leading edge of our efforts there have been on two of the most competitive industries, telecommunications and computers, and we are removing licensing requirements for the majority of telecommunications exports to most countries. And we have removed controls from all of our less sophisticated computers. The bottom line from this, is that these changes will decontrol, about 70 percent of the computers we sell, including nearly all PCs and lower level work stations.

Now, integrating this defense and commercial industrial base and incorporating these new advances in information technology, will require dramatic changes not only in our department but in your companies. The British writer Samuel Johnson once noted that "Change is inconvenient, even when it is for the better." Many of the changes facing the Defense Department, and the industry in this post Cold War Information Age are truly inconvenient. Some of them are even painful. But in the long run, I think they will definitely be for the better, for the department, for the industry, and for our national security.

I thank you.

(Applause)

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